Project Title	Funding	Strategic Plan Objective	Institution
Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	$150,000	Q2.S.D	Columbia University
Aberrant synaptic function caused by TSC mutation in autism	$75,000	Q2.S.D	Columbia University
ACE Center: Cognitive affective and neurochemical processes underlying is in autism	$382,540	Q2.Other	University of Illinois at Chicago
Activity-dependent phosphorylation of MeCP2	$173,979	Q2.S.D	Harvard Medical School
Allelic choice in Rett syndrome	$394,425	Q2.S.D	Winifred Masterson Burke Medical Research Institute
Analysis of Fgf17 roles and regulation in mammalian forebrain development	$52,154	Q2.Other	University of California, San Francisco
Angelman syndrome (AS)	$208,335	Q2.S.D	University of Alabama at Birmingham
A sex-specific dissection of autism genetics	$270,375	Q2.S.B	University of California, San Francisco
A sex-specific dissection of autism genetics	$150,000	Q2.S.B	University of California, San Francisco
A systematic test of the relation of ASD heterogeneity to synaptic function	$875,864	Q2.Other	Stanford University
A systems biology approach to unravel the underlying functional modules of ASD	$655,975	Q2.Other	University of California, San Diego
Augmentation of the cholinergic system in fragile X syndrome: A double-blind placebo study	$240,000	Q2.S.D	Stanford University
Autism and the insula: Genomic and neural circuits	$620,305	Q2.Other	California Institute of Technology
Autism-specific mutation in DACT1: Impact on brain development in a mouse model	$231,750	Q2.Other	University of California, San Francisco
BDNF and the restoration of spine plasticity with autism spectrum disorders	$564,519	Q2.S.D	University of California, Irvine
BDNF secretion and neural precursor migration	$0	Q2.Other	Dana-Farber Cancer Institute
Brain lipid rafts in cholesterol biosynthesis disorders	$63,000	Q2.Other	Medical College of Wisconsin
Cell adhesion molecules in CNS development	$541,105	Q2.Other	The Scripps Research Institute
Cell-based genomic analysis in mouse models of Rett syndrome	$513,667	Q2.S.D	Cold Spring Harbor Laboratory
Cell type-based genomics of developmental plasticity in cortical GABA interneurons	$210,000	Q2.Other	Cold Spring Harbor Laboratory
Cellular and molecular alterations in GABAergic inhibitor circuits by mutations in MeCP2	$330,774	Q2.S.D	Cold Spring Harbor Laboratory
Cellular characterization of Caspr2	$23,907	Q2.Other	University of California, San Diego
Coordinated control of synapse development by autism-linked genes	$150,000	Q2.S.D	University of Texas Southwestern Medical Center
Cortical circuit changes and mechanisms in a mouse model of fragile X syndrome	$290,266	Q2.S.D	University of Texas Southwestern Medical Center
Defining cells and circuits affected in autism spectrum disorders	$820,059	Q2.Other	The Rockefeller University
Developing novel automated apparatus for studying battery of social behaviors in mutant mouse models for autism	$217,948	Q2.Other	Weizmann Institute of Science

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Developmental versus acute mechanisms mediating altered excitatory synaptic function in the fragile X syndrome mouse model	$127,500	Q2.S.D	University of Texas Southwestern Medical Center
Development of novel diagnostics for fragile X syndrome	$532,677	Q2.S.D	JS Genetics, Inc.
Elucidating the function of class 4 semaphorins in GABAergic synapse formation	$320,250	Q2.Other	Brandeis University
Elucidating the roles of SHANK3 and FXR in the autism interactome	$396,509	Q2.S.D	Baylor College of Medicine
Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome	$150,000	Q2.S.D	George Washington University
Engrailed and the control of synaptic circuitry in drosophila	$112,500	Q2.Other	University of Puerto Rico Medical Sciences Campus
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	$474,750	Q2.Other	Memorial Sloan-Kettering Cancer Center
Establishing zebrafish as a model for RAI1 gene dosage	$74,750	Q2.S.D	Virginia Commonwealth University
Excessive cap-dependent translation as a molecular mechanism underlying ASD	$549,386	Q2.Other	New York University
Functional analysis of neurexin IV in Drosophila	$148,746	Q2.Other	University of California, Los Angeles
Functional circuit disorders of sensory cortex in ASD and RTT	$261,599	Q2.S.D	University of Pennsylvania
Function and dysfunction of neuroligins in synaptic circuits	$150,000	Q2.Other	Stanford University
Function and structure adaptations in forebrain development	$580,377	Q2.Other	University of Southern California
Function of neurexins	$464,471	Q2.Other	Stanford University
Fundamental mechanisms of GPR56 activation and regulation	$134,269	Q2.S.D	Emory University
GABA(A) receptor modulation via the beta subunit	$226,499	Q2.Other	Emory University
GABAergic dysfunction in autism	$290,090	Q2.Other	University of Minnesota
Gene silencing in fragile X syndrome	$323,483	Q2.S.D	National Institutes of Health
Genetic and developmental analyses of fragile X syndrome	$544,592	Q2.S.D	Vanderbilt University
Genetic studies of autism-related Drosophila neurexin and neuroligin	$137,500	Q2.Other	The University of North Carolina at Chapel Hill
Glial control of neuronal receptive ending morphology	$422,500	Q2.Other	The Rockefeller University
Glutamate receptor desensitization and its modulation	$328,338	Q2.Other	Colorado State University
High-throughput DNA sequencing method for probing the connectivity of neural circuits at single-neuron resolution	$435,000	Q2.Other	Cold Spring Harbor Laboratory

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Homeostatic regulation of presynaptic function by dendritic mTORC1	$31,705	Q2.Other	University of Michigan
Identification of candidate genes at the synapse in autism spectrum disorders	$167,751	Q2.Other	Yale University
Imaging PTEN-induced changes in adult cortical structure and function in vivo	$278,686	Q2.Other	University of California, Los Angeles
Imaging signal transduction in single dendritic spines	$386,100	Q2.Other	Duke University
Imaging synaptic neurexin-neuroligin complexes by proximity biotinylation: Applications to the molecular pathogenesis of autism	$0	Q2.Other	Massachusetts Institute of Technology
Investigation of postnatal drug intervention's potential in rescuing the symptoms of fragile X syndrome in adult mice	$0	Q2.S.D	Massachusetts Institute of Technology
Investigation of sex differences associated with autism candidate gene, CYFIP1	$31,561	Q2.S.B	University of California, Los Angeles
In-vivo imaging of neuronal structure and function in a reversible mouse model for autism.	$28,000	Q2.S.D	Baylor College of Medicine
Kinetics of drug macromolecule complex formation	$729,415	Q2.Other	University of California, San Diego
L-type calcium channel regulation of neuronal differentiation	$41,380	Q2.S.D	Stanford University
MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism	$320,469	Q2.S.D	University of Alabama at Birmingham
Met signaling in neural development and circuitry formation	$81,998	Q2.Other	University of Southern California
MicroRNAs in synaptic plasticity and behaviors relevant to autism	$131,220	Q2.S.D	Massachusetts General Hospital
Modulation of fxr1 splicing as a treatment strategy for autism in fragile X syndrome	$158,649	Q2.S.D	Stanford University
Molecular basis of autism associated with human adenylosuccinate lyase gene defects	$0	Q2.S.D	University of Delaware
Molecular mechanisms regulating synaptic strength	$296,257	Q2.Other	Washington University
Morphogenesis and function of the cerebral cortex	$409,165	Q2.Other	Yale University
Mouse models of human autism spectrum disorders: Gene targeting in specific brain regions	$400,000	Q2.S.D	University of Texas Southwestern Medical Center
Neural circuit deficits in animal models of Rett syndrome	$44,000	Q2.S.D	Cold Spring Harbor Laboratory
Neurexin-neuroligin trans-synaptic interaction in learning and memory	$100,000	Q2.Other	Columbia University
Neurexin-neuroligin trans-synaptic interaction in learning and memory	$100,000	Q2.Other	Columbia University
Neuroligin regulation of central GABAergic synapses	$78,000	Q2.Other	Duke University

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Neuroligins and neurexins as autism candidate genes: Study of their association in synaptic connectivity	$60,000	Q2.Other	University of California, San Diego
Neuronal activity-dependent regulation of MeCP2	$437,522	Q2.S.D	Harvard Medical School
Neuronal activity-dependent regulation of MeCP2 (supplement)	$77,123	Q2.S.D	Harvard Medical School
New approaches to local translation: SpaceSTAMP of proteins synthesized in axons	$161,094	Q2.S.D	Dana-Farber Cancer Institute
Olfactory abnormalities in the modeling of Rett syndrome	$355,163	Q2.S.D	Johns Hopkins University
Perturbed activity-dependent plasticity mechanisms in autism	$311,292	Q2.Other	Harvard Medical School
Presynaptic fragile X proteins	$90,000	Q2.S.D	Brown University
Probing a monogenic form of autism from molecules to behavior	$312,500	Q2.S.D	Stanford University
Proteomics in drosophila to identify autism candidate substrates of UBE3A	$316,355	Q2.S.D	University of Tennessee Health Science Center
Quantitative proteomic approach towards understanding and treating autism	$75,000	Q2.S.D	Emory University
Regulation of 22q11 genes in embryonic and adult forebrain	$9,806	Q2.S.D	University of North Carolina at Chapel Hill
Regulation of 22q11 genes in embryonic and adult forebrain	$313,000	Q2.S.D	The George Washington University
Regulation of activity-dependent ProSAP2 synaptic dynamics	$41,380	Q2.Other	Stanford University
Regulation of synapse elimination by FMRP	$52,154	Q2.S.D	University of Texas Southwestern Medical Center
Regulation of synaptogenesis by cyclin-dependent kinase 5	$342,454	Q2.Other	Massachusetts Institute of Technology
Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans	$125,000	Q2.Other	Massachusetts General Hospital
Role of autism-susceptibility gene, CNTNAP2, in neural circuitry for vocal communication	$0	Q2.Other	University of California, Los Angeles
Role of GluK6 in cerebella circuitry development	$52,106	Q2.Other	Yale University
Role of intracellular mGluR5 in fragile X syndrome and autism	$75,000	Q2.S.D	Washington University in St. Louis
Role of micro-RNAs in ASD affected circuit formation and function	$127,085	Q2.Other	University of California, San Francisco
Role of neuroligin in synapse stability	$127,500	Q2.Other	Oklahoma Medical Research Foundation
Role of neuroligins in long-term plasticity at excitatory and inhibitory synapses	$59,918	Q2.Other	Albert Einstein College of Medicine of Yeshiva University
Role of neuronal migration genes in synaptogenesis and plasticity	$47,606	Q2.Other	Weill Cornell Medical College

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Role of Pam in synaptic morphology and function	$127,497	Q2.Other	Massachusetts General Hospital
Roles of Wnt signaling/scaffolding molecules in autism	$28,000	Q2.Other	University of California, San Francisco
Self-injurious behavior: An animal model of an autism endophenotype	$0	Q2.Other	University of Florida
Serotonin signal transduction in two groups of autistic patients	$157,000	Q2.Other	University of Illinois at Chicago
Steroid receptors and brain sex differences	$301,240	Q2.S.B	University of Wisconsin - Madison
Studies on protein synthesis and long-term adaptive responses in the CNS	$1,992,862	Q2.Other	National Institutes of Health
Study of fragile X mental retardation protein in synaptic function and plasticity	$392,087	Q2.S.D	University of Texas Southwestern Medical Center
Synaptic analysis of neuroligin1 function	$52,154	Q2.Other	Stanford University
Synaptic phenotype, development, and plasticity in the fragile X mouse	$421,590	Q2.S.D	University of Illinois at Urbana Champaign
The effects of Npas4 and Sema4D on inhibitory synapse formation	$0	Q2.Other	Children's Hospital Boston
The functional link between DISC1 and neuroligins: Two genetic factors in the etiology of autism	$0	Q2.S.D	Children's Memorial Hospital, Chicago
The mechanism and significance of Evf ncRNA regulation of the DLX genes	$438,060	Q2.Other	Children's Memorial Hospital, Chicago
The mechanism and significance of Evf ncRNA regulation of the DLX genes	$2,425	Q2.S.D	University of Washington
The microRNA pathway in translational regulation of neuronal development	$37,604	Q2.S.D	J. David Gladstone Institutes
The microRNA pathway in translational regulation of neuronal development	$376,031	Q2.S.D	University of Massachusetts Medical School
The role of CNTNAP2 in embryonic neural stem cell regulation	$150,000	Q2.Other	Johns Hopkins University School of Medicine
The role of FOX-1 in neurodevelopment and autistic spectrum disorder	$142,677	Q2.Other	University of California, Los Angeles
The role of intracellular metabotropic glutamate receptor 5 at the synapse	$25,890	Q2.S.D	Washington University in St. Louis
The role of MeCP2 in Rett syndrome	$337,753	Q2.S.D	University of California, Davis
The role of the autism-associated gene tuberous sclerosis complex 2 (TSC2) in presynaptic development	$56,000	Q2.S.D	University of California, San Diego
Translation regulation in hippocampal LTP and LTD	$372,141	Q2.S.D	New York University
TrkB agonist(s), a potential therapy for autism spectrum disorders	$269,500	Q2.S.D	University of California, Los Angeles
Ube3a requirements for structural plasticity of synapses	$40,000	Q2.Other	Univ of North Carolina
Visual system connectivity in a high-risk model of autism	$0	Q2.S.D	Children's Hospital Boston

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Young development of a novel PET ligand for detecting oxytocin receptors in brain	$264,000	Q2.Other	Emory University